CLAIMS

1. An expandable stent comprising:

a plurality of substantially cylindrical, serpentine ring structures, wherein each ring structure extends around a circumference of the stent and comprises at least one unit structure, wherein said at least one unit structure comprises a plurality of strut members and a plurality of bends, said strut members and bends forming a substantially zig-zag pattern; and

at least one connector member joining two of said ring structures when said stent is in an unexpanded state, wherein said at least one connector member is biodegradable and adapted to biodegrade when said stent is in an expanded state so that said two ring structures become substantially disjoined.

2. The expandable stent of claim 1, wherein said stent is a substantially integral, tubular shape in said unexpanded state.

3. The expandable stent of claim 1, wherein said stent is substantially Y-shaped when in said unexpanded state.

4. The expandable stent of claim 1, wherein said at least one connector member is made of one or more of polymers, copolymers, block polymers, poly-lactic acid, poly-glycolic acid, polyglycolides, polylactides, polycaprolactones, polyglycerol sebacate, polycarbonates, polyethylene oxide, polybutylene terepthalate, polydioxanones, hybrids, composites, collagen matrices with growth modulators, proteoglycans, glycosaminoglycans, vacuum formed small intestinal submucosa, fibers, chitin, and dextran.

5. The expandable stent of claim 1, wherein said at least one connector member is adapted to biodegrade within thirty days to one-hundred eighty days after said stent is expanded.

6. The expandable stent of claim 1, wherein said at least one connector member comprises a multitude of layers each having varying degradation rates.

7. The expandable stent of claim 1, wherein said at least one connector member comprises one layer having a substantially uniform degradation rate.

8. The expandable stent of claim 1, wherein said ring structures are made of one or more of nitinol, stainless steel, 316 L stainless steel, cobalt chromium, nickel titanium, platinum, and inconel.

9. The expandable stent of claim 1, wherein said ring structures comprise a non-biodegradable base material and one or more biodegradable coating layers.

10. The expandable stent of claim 9, wherein said one or more biodegradable coating layers is adapted to biodegrade within thirty days to one-hundred eighty days after said stent is expanded.

11. The expandable stent of claim 9, wherein said ring structures comprise multiple biodegradable coating layers having varying degradation rates.

12. The expandable stent of claim 9, wherein said ring structures comprise one biodegradable coating layer having a uniform degradation rate.

13. The expandable stent of claim 1, wherein said ring structures comprise a base material made of a combination of non-biodegradable materials and biodegradable polymers.

14. The expandable stent of claim 13, wherein said biodegradable polymers of said base material are adapted to biodegrade within thirty days to one-hundred eighty days after said stent is expanded.

15. The expandable stent of claim 13, wherein said biodegradable polymers of said base material have varying degradation rates and are dispersed unevenly throughout said base material.

16. The expandable stent of claim 13, wherein said biodegradable polymers of said base material are dispersed uniformly throughout said base material to provide a uniform degradation rate.

17. The expandable stent of claim 1, wherein said stent is one of self-expanding and balloon-expandable.

18. The expandable stent of claim 1, wherein when said at least one connector member biodegrades in an expanded state, said two ring structures become completely disjoined so that said stent does not form an integral structure.

19. The expandable stent of claim 1, wherein said at least one connector member is flexible prior to the stent being expanded.

20. The expandable stent of claim 1, wherein said at least one connector member is substantially U or V shaped.

21. The expandable stent of claim 1, wherein said at least one connector member is curved.

22. The expandable stent of claim 1, wherein said at least one connector member is straight.

23. The expandable stent of claim 1, wherein when said stent is in an unexpanded state said at least one connector member has first and second ends, said first end being connected to one of said plurality of bends of one of said two ring structures and said second end being connected to another of said plurality of bends of the other of said two ring structures.

24. The expandable stent of claim 1, wherein when said stent is in an unexpanded state there are two or more connector members joining said

two ring structures and adjacent connector members are circumferentially aligned.

25. The expandable stent of claim 1, wherein adjacent ring structures are axially aligned.

26. The expandable stent of claim 1, wherein a plurality of substantially straight tie-bars join a plurality of said ring structures.

27. A method of expanding a stent comprising:

providing an expandable stent which in an unexpanded state comprises a plurality of substantially cylindrical, serpentine ring structures, wherein each ring structure extends around a circumference of the stent, and at least one biodegradable connector member joining two of said ring structures;

delivering the stent in an unexpanded state to a final destination within a mammalian body;

expanding the stent; and

biodegrading said at least one connector member so that said two ring structures become substantially disjoined.

28. The method of claim 27 wherein, each ring structure extends around a circumference of the stent and comprises at least one unit structure, wherein said at least one unit structure comprises a plurality of strut members and a plurality of bends, said strut members and bends forming a substantially zig-zag pattern.

29. The method of claim 27, wherein said at least one connector member is made of one or more of polymers, copolymers, block polymers, poly-lactic acid, poly-glycolic acid, polyglycolides, polylactides, polycaprolactones, polyglycerol sebacate, polycarbonates, polyethylene oxide, polybutylene terepthalate, polydioxanones, hybrids, composites, collagen matrices with growth modulators, proteoglycans,

glycosaminoglycans, vacuum formed small intestinal submucosa, fibers, chitin, and dextran.

30. The method of claim 27, wherein said at least one connector member biodegrades within thirty days to one-hundred eighty days after said stent is expanded.

31. The method of claim 27, wherein said at least one connector member comprises a multitude of layers each having varying degradation rates.

32. The method of claim 27, wherein said at least one connector member comprises one layer having a substantially uniform degradation rate.

33. The method of claim 27, wherein said ring structures are made of one or more of nitinol, stainless steel, 316 L stainless steel, cobalt chromium, nickel titanium, platinum, and inconel.

34. The method of claim 27, wherein said ring structures comprise a non-biodegradable base material and one or more biodegradable coating layers.

35. The method of claim 34, containing the additional step of biodegrading said one or more biodegradable coating layers within thirty days to one-hundred eighty days after said stent is expanded.

36. The method of claim 34, wherein said ring structures comprise multiple biodegradable coating layers having varying degradation rates.

37. The method of claim 34, wherein said ring structures comprise one biodegradable coating layer having a uniform degradation rate.

38. The method of claim 27, wherein said ring structures comprise a base material made of a combination of non-biodegradable materials and biodegradable polymers.

39. The method of claim 38, containing the additional step of biodegrading said polymers of said base material within thirty days to one-hundred eighty days after said stent is expanded.

40. The method of claim 38, wherein said biodegradable polymers of said base material have varying degradation rates and are dispersed unevenly throughout said base material.

41. The method of claim 38, wherein said biodegradable polymers of said base material are dispersed uniformly throughout said base material to provide a uniform degradation rate.

42. The method of claim 27, wherein said stent is expanded using one of a self-expanding process and a balloon-expandable process.

43. The method of claim 27, wherein when said at least one connector member biodegrades in an expanded state, said two ring structures become completely disjoined so that said stent does not form an integral structure.

44. The method of claim 27, wherein said at least one connector member is flexible prior to the stent being expanded.

45. The method of claim 27, wherein said at least one connector member is one of substantially U and V shaped.

46. The method of claim 27, wherein said at least one connector member is curved.

47. The method of claim 27, wherein said at least one connector member is straight.